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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,568	05/26/2006	Noriharu Suematsu	1163-0568PUS1	5549

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EXAMINER	
TIMORY, KABIR A	

ART UNIT	PAPER NUMBER
2611	

NOTIFICATION DATE	DELIVERY MODE
05/29/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/580,568	SUEMATSU ET AL.	
	Examiner	Art Unit	
	KABIR A. TIMORY	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13-23* is/are rejected.

7)☒ Claim(s) *12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/26/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-10, 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oberg et al. (US 5751149) in view of Wendt et al. (US 5194823).

Regarding claims 1 and 13:

As shown in figures 1-3, Oberg et al. disclose a power supply apparatus comprising:

- radio frequency signal oscillating means (31 in figure 1) for oscillating a radio frequency signal (col 3, lines 45-48);
- modulation means (30 in figure 1) for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal oscillating means (31 in figure 1) , and for outputting a pulse signal (37 in figure 1, col 3, lines 47-55);
- amplifying means (35 in figure 1) for amplifying the radio frequency signal oscillated by said radio frequency signal oscillating means (31 in figure 1) or the pulse signal

(37 in figure 1) output from said modulation means (30 in figure 1, col 3, lines 47-55); and

- transmission means (17 in figure 1) for transmitting the radio frequency signal or pulse signal (41 in figure 1) amplified by said amplifying means (35 in figure 1, col 3, lines 47-67).

Oberg et al. disclose all of the subject matter as described above except for specifically teaching wherein **s**aid amplifying means amplifies the radio frequency signal or pulse signal in a manner that peak power of the radio frequency signal becomes greater than peak power of the pulse signal.

However, Wendt et al. in the same field of endeavor teach wherein **s**aid amplifying means amplifies the radio frequency signal or pulse signal in a manner that peak power of the radio frequency signal becomes greater than peak power of the pulse signal (col 1, lines 6-12). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to use the amplifier as taught by Wendt et al. to modify the system and method of Oberg et al. in order to provide amplify the RF signal to a high output power and the peak pulse to a desired value.

Regarding claims 3 and 15:

As shown in figures 1-3, Oberg et al. disclose a power supply apparatus comprising:

- radio frequency signal oscillating means (31 in figure 1) for oscillating a radio frequency signal (col 3, lines 45-48);

- modulation means (30 in figure 1) for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal oscillating means (31 in figure 1), and for outputting a pulse signal (37 in figure 1, col 3, lines 47-55);
- amplifying means (35 in figure 1) for amplifying the pulse signal output (37 in figure 1) from said modulation means (30 in figure 1); and
- transmission means (17 in figure 1) for transmitting the pulse signal (41 in figure 1) amplified by said amplifying means (35 in figure 1), wherein when said transmission means (17 in figure 1) transmits a pulse signal (41 in figure 1) for power supply, said modulation means (30 in figure 1) increases a duty ratio of the pulse signal (35 and 37 in figure 1 col 3, lines 47-67).

Oberg et al. disclose all of the subject matter as described above except for specifically teaching and said amplifying means increases an amplification factor of the pulse signal to increase the peak power of the pulse signal, as compared with a case of transmitting a pulse signal corresponding to transmission data.

However, Wendt et al. in the same field of endeavor teach and said amplifying means increases an amplification factor of the pulse signal to increase the peak power of the pulse signal, as compared with a case of transmitting a pulse signal corresponding to transmission data (col 1, lines 6-12). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to use the amplifier as taught by Wendt et al. to modify the system and method of Oberg et al. in order to provide amplify the RF signal to a high output power and the peak pulse to a desired value.

Regarding claims 7 and 19:

As shown in figures 1-3, Oberg et al. disclose a power supply apparatus comprising:

- radio frequency signal oscillating means (31 in figure 1) for oscillating a radio frequency signal (col 3, lines 45-48);
- modulation means (30 in figure 1) for carrying out pulse modulation of the radio frequency signal (33 in figure 1) oscillated by said radio frequency signal oscillating means (31 in figure 1), and for outputting a pulse signal (37 in figure 1, col 3, lines 47-55);
- first amplifying means (35 in figure 1) for amplifying the pulse signal (37 in figure 1) output from said modulation means (30 in figure 1); and
- transmission means (17 in figure 1) for transmitting the pulse signal (41 in figure 1) amplified by said first amplifying means (35 in figure 1) or the pulse signal amplified by said second amplifying means (col 3, lines 47-55).

Oberg et al. disclose all of the subject matter as described above except for specifically teaching second amplifying means for amplifying the pulse signal amplified by said first amplifying means; wherein said modulation means makes a duty ratio of the pulse signal greater when said transmission means transmits the pulse signal amplified by said second amplifying means than when said transmission means transmits the pulse signal amplified by said first amplifying means.

However, Wendt et al. in the same field of endeavor teach second amplifying means (2 in figure 4) for amplifying the pulse signal amplified by said first amplifying

means (13 in figure 4); wherein said modulation means makes a duty ratio of the pulse signal greater when said transmission means transmits the pulse signal amplified by said second amplifying means than when said transmission means transmits the pulse signal amplified by said first amplifying means (abstract, col 1, lines 6-12). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to use the amplifier as taught by Wendt et al. to modify the system and method of Oberg et al. in order to provide amplify the RF signal to a high output power and the peak pulse to a desired value.

Regarding claims 2 and 14:

Oberg et al. further disclose wherein the radio frequency signal (33 in figure 1) oscillated from said radio frequency signal oscillating means (31 in figure 1) is an unmodulated continuous wave (33 in figure 1) (figure 1 shows that the RF signal 33 is a continuous wave and unmodulated signal).

Regarding claims 4, 8, 16, and 20:

Oberg et al. further disclose wherein said modulation means (30 in figure 1) carries out pulse modulation of the radio frequency signal (33 in figure 1), and outputs the pulse signal (37 in figure 1) for the power supply and the pulse signal corresponding to the transmission data alternately in time (col 3, lines 45-67, col 4, lines 1-4).

Regarding claims 5, 9, 17, and 21:

Oberg et al. further disclose wherein said modulation means (30 in figure 1) outputs the pulse signal for the power supply at every predetermined time interval

(figures 2a and 3a) after the pulse signal for the power supply is transmitted col 4, lines 25-37).

Regarding claims 6, 10, 18, and 22:

Oberg et al. further disclose wherein said modulation means (30 in figure 1) modulates, instead of carrying out the pulse modulation of the radio frequency signal (col 3, lines 45-67).

Oberg et al. disclose all of the subject matter as described above except for specifically teaching the radio frequency signal using a digital modulation method of generating a modulation signal whose envelope varies.

However, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the modulator of Oberg et al. in order the radio frequency signal using a digital modulation method of generating a modulation signal whose envelope varies.

3. Claims 11 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oberg et al. in view of Wendt et al. and further in view of Richardson et al. (US 20040178944).

Regarding claims 11 and 23:

As shown in figures 1-3, Oberg et al. disclose a power supply apparatus comprising:

- radio frequency signal oscillating means (31 in figure 1) for oscillating a radio frequency signal (col 3, lines 45-48);
- modulation means (30 in figure 1) for carrying out pulse modulation of the radio frequency signal (33 in figure 1) oscillated by said radio frequency signal oscillating means (31 in figure 1), and for outputting a pulse signal (37 in figure 1, col 3, lines 47-55);
- first amplifying means (35 in figure 1) for amplifying the pulse signal (37 in figure 1) output from said modulation means (30 in figure 1);
- transmitting (17 in figure 1) and receiving means (19 in figure 1) for transmitting the pulse signal (41 in figure 1) amplified by said first amplifying means (35 in figure 1) or the pulse signal amplified by said second amplifying means (col 3, lines 45-67), and for receiving a pulse signal (43 in figure 1); and
- demodulation means (49 in figure 1) for demodulating the pulse signal (43 and 48 in figure 1) received by said transmitting (17 in figure 1) and receiving means (19 in figure 1).

Oberg et al. disclose all of the subject matter as described above except for specifically teaching second amplifying means for amplifying the pulse signal amplified by said first amplifying means; wherein said modulation means makes, when said transmitting and receiving means transmits the pulse signal amplified by said second amplifying means, a duty ratio of the pulse signal greater than when said transmitting and receiving means transmits the pulse signal amplified by said first amplifying means.

However, Wendt et al. in the same field of endeavor teach second amplifying means (2 in figure 1) for amplifying the pulse signal amplified by said first amplifying means (13 in figure 1); wherein said modulation means makes, when said transmitting and receiving means transmits the pulse signal amplified by said second amplifying means, a duty ratio of the pulse signal greater than when said transmitting and receiving means transmits the pulse signal amplified by said first amplifying means (abstract, col 1, lines 6-12). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to use the amplifier as taught by Wendt et al. to modify the system and method of Oberg et al. in order to provide amplify the RF signal to a high output power and the peak pulse to a desired value.

Oberg et al. and Wendt et al. disclose all of the subject matter as described above except for specifically teaching to noncontact wireless communication equipment; transmitted from said noncontact wireless communication equipment.

However, Richardson et al. in the same field of endeavor teach to noncontact wireless communication (RFID and Tag system is interpreted to be the noncontact wireless communication) equipment (figures 1 and 2); transmitted from said noncontact wireless communication equipment (figures 1 and 2, abstract, par 0004, 0035). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to use the RFID and Tag system as taught by Richardson et al. to modify the system and method of Oberg et al. in order to provide wireless communication such as radar transmission between the interrogator and transponder.

Allowable Subject Matter

4. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record, Oberg et al. does not teach or suggest a switch that is brought to an OFF state when said circulator supplies said antenna with the pulse signal amplified by said first or second amplifying means, and that is brought to an ON state when said circulator supplies said demodulation means with the pulse signal received by said antenna, said switch being interposed between said circulator and said demodulation means.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KABIR A. TIMORY whose telephone number is (571)270-1674. The examiner can normally be reached on 6:30 AM - 3:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kabir A Timory/
Examiner, Art Unit 2611
/Shuwang Liu/
Supervisory Patent Examiner, Art Unit 2611